

CLAIMS:

1. A stamp (10) for use in a lithographic process, which stamp (10) comprises a stamp body (5) with a printing face (3), said stamp body (5) having a first recess (11) with an aperture (15) in the printing face (3), characterized in that

the first recess (11) becomes narrower as its distance to the printing face (3) increases, and cross-sections of the first recess (11) parallel to the printing face (3), when projected perpendicularly on the printing face (3), lie within the aperture (15).

2. A stamp (10) as claimed in claim 1, characterized in that the first recess (11) has a triangular shape in a first plane perpendicular to the printing face (3).

3. A stamp (10) as claimed in Claim 1, characterized in that a second recess (12) with an opening (16) in the printing face (3) is present in the stamp body (5),

which second recess (12) has cross-sections parallel to the printing face (3) and becomes narrower as its distance to the printing face (3) increases, said cross-sections, when projected perpendicularly on the printing face (3), lie within the aperture (16), and said aperture (16) is present at a distance smaller than 1 μm from the aperture (15) of the first recess (11).

4. A stamp (10) as claimed in claim 1, characterized in that a third recess (13) with an aperture (17) in the printing face (3) is present in the stamp body (5),

which recess (13) has cross-sections parallel to the printing face (3) and becomes substantially narrower as its distance to the printing face (3) increases, said cross-sections, when projected perpendicularly on the printing face (3), lying within the aperture (17),

the aperture (17) of the third recess (13) and the aperture (15) of the first recess (11) each have a dimension in a first direction in the printing face (3), and

said dimension of the aperture (17) of the third recess (13) is at least five times the dimension of said aperture (15) of the first recess (11).

5. A stamp (10) as claimed in claim 4, characterized in that said dimension of the aperture (17) of the third recess (13) is at least twenty times said dimension of the aperture (15) of the first recess (11).

6. A method of manufacturing a stamp (10) for use in a lithographic process, which stamp (10, 110) has a stamp body (5, 105) with a surface (4, 104) which coincides partly with the printing face (3, 103), comprising the steps of:

anisotropic etching of a surface (27) of a mold (20) into a patterned mold surface (29), such that a first recess (21) is created in the mold (20) with an aperture (41) in the original surface (27), which first recess (21) becomes narrower as its distance to the original surface (27) increases and has cross-sections parallel to the original surface (27) which, when projected perpendicularly on the original surface (27), lie within the aperture (41), and

making a replica of the patterned mold surface (29) in a first body (105) with a patterned surface (104).

7. A method as claimed in claim 6, characterized in that a replica is made of the patterned surface (104) of the first body (105) in a second body (5) which has a patterned surface (4).

8. A method of manufacturing an electronic component comprising the step of applying a patterned layer of a first material on a surface of a substrate by means of a stamp (10) provided with a stamp body (5) and a printing face (3), which stamp body comprises a first recess (11) with an aperture (15) in the printing face (3), by which method the printing face (3) of the stamp (10) is placed on the surface of the substrate, said first material being present against the printing face (3), such that the surface of the substrate is provided with the patterned layer,

characterized in that a stamp (10) is used of which the first recess (11) becomes narrower as its distance to the printing face (3) increases, and

cross-sections of the first recess (11), when projected perpendicularly on the printing face (3), lie within the aperture (15).

9. A method as claimed in claim 8, characterized in that the first material is an
5 organic material chosen from the group of electrically semiconducting and electrically conducting materials.

10. A method as claimed in claim 8, characterized in that the first material takes part in a reaction which takes place at the surface of the substrate.

09/25/97 9:01:12 AM